

ABSTRACT OF THE DISCLOSURE

A polarization beam splitter and combiner and a polarization insensitive modulating and switching method and apparatus. In one aspect of the present invention, the disclosed apparatus a first optical waveguide
5 disposed in a semiconductor material layer. A second optical waveguide is also disposed in the semiconductor material layer. An insulating region is disposed between the first and second optical waveguides to provide a coupling region in the semiconductor material layer between the first and second optical waveguides. The coupling region has a first coupling length
10 for a first polarization mode of an optical beam directed through one of the first and second optical waveguides into the coupling region. The coupling region has a second coupling length for a second polarization mode of the optical beam.